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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>PCT/GB 03/04834</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. <b>PCT/GB 03/04834</b>	International filing date (day/month/year) <b>10.11.2003</b>	Priority date (day/month/year) <b>26.11.2002</b>
International Patent Classification (IPC) or both national classification and IPC <b>C07C235/20</b>		
Applicant <b>SYNGENTA LIMITED</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
- I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application

Date of submission of the demand  <b>25.05.2004</b>	Date of completion of this report  <b>29.06.2004</b>
Name and mailing address of the international preliminary examining authority:   <b>European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840</b>	Authorized Officer  <b>Rufet, J</b>  Telephone No. +49 30 25901-332  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB 03/04834

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-47 as originally filed

**Claims, Numbers**

1-12 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
  - ☐ the language of publication of the international application (under Rule 48.3(b)).
  - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
  - ☐ filed together with the international application in computer readable form.
  - ☐ furnished subsequently to this Authority in written form.
  - ☐ furnished subsequently to this Authority in computer readable form.
  - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
  - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. The amendments have resulted in the cancellation of:
- ☐ the description, pages:
  - ☐ the claims, Nos.:
  - ☐ the drawings, sheets:
5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/GB 03/04834**

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-12
	No: Claims	
Inventive step (IS)	Yes: Claims	1-12
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-12
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB03/04834

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

D1: EP-A-0001721 corresponds to US-A-4168319 cited by Applicant

D2: EP-A-0010298

D3: EP-A-0751120

D4: JP(A) 04021677

D5: DE-A-3702964

D6: DE-A-2948095

D7: US-A-4049423 cited by Applicant

D8: FR-A-2359816 corresponds to US-A-4116677 cited by Applicant

**1. Clarity**

Claim 10 discloses a process for the preparation of a compound according to formula (1) of claim 1 without any technical measures of the process. Claim 10 is therefore unclear.

**2. Novelty**

The claimed subject-matter is in view of the teaching of the prior art D1-D8 considered to be novel for the following reasons:

Documents D1-D4 refer also to N-alkynyl-2-(substituted phenoxy)alkylamide compounds useful as fungicides which differ from the claimed compounds according to formula (1) at least by the nature of R1 (see D1, claim 1; D2, page 22, compounds no. 53-55, claims; D3, table 1a, compounds 82-84, claims; D4 abstract).

Documents D5 and D6 disclose structurally different phenoxyalkylamide derivatives useful as fungicides which do not have a N-alkynyl group.

The compounds of D5 differ also from the claimed compounds according to formula (1) by the nature of R1 (see claims).

The compounds of D6 differ also from the claimed compounds according to formula (1) by the nature of the substituents X, Y and Z according to formula (1) on file.

Documents D7 and D8 disclose also to N-alkynyl-2-(substituted phenoxy)alkylamide compounds useful as **herbicides** which differ from the claimed compounds

according to formula (1) only by the nature of R1 (D7: -OCH<sub>3</sub>; D8: methyl or ethyl).

### **3. Inventive step**

3.1 According to the application (see especially page 1, I. 9-10 of the description) the problem underlying the invention is to provide further N-alkynyl-2-(substituted phenoxy)alkylamide compounds useful as fungicides.

3.2 Documents D1-D6 are relevant prior art for the evaluation of an inventive step, since these documents also refer to structurally close compounds useful as fungicides (see D1, especially p. 3, I. 7-11). Document D1 is considered to represent the closest prior art, since the compounds of D1 only differ from the claimed compounds by the nature of R1 (Ethyl instead of Alkoxyalkyl, alkylthioalkyl, alkylsulphinylalkyl or alkylsulphonylalkyl having up to 3 carbon atoms).

3.3 In view of the examples and the technical information indicated in p. 47, especially I. 15-20 (fungicidal activity of compounds of examples 1, 2, 5 and 6) it is credible that the problem as defined above has actually been solved by the technical features of the claimed compounds according to formula (I).

3.4 The proposed solution according to claims 1-12 is in view of the prior art D1-D6 considered as surprising. Starting from the disclosure of the closest prior art D1, the person skilled in the art looking for further N-alkynyl-2-(substituted phenoxy)alkylamide compounds useful as fungicides would not have been led to replace the **ethyl** group (R1) by an Alkoxyalkyl, alkylthioalkyl, alkylsulphinylalkyl or alkylsulphonylalkyl group having up to 3 carbon atoms, since there is no indication in D2-D5 showing that the R1 as claimed is a possible alternative to the ethyl group.

From D6 the person skilled in the art knows that the methoxymethyl group is a possible alternative to the methyl group (see claim 1) but not to the ethyl group. Moreover he would not have considered this feature if he wanted to produce further fungicides from D1 and D6, since it is stressed in page 6, lines 18-31 of D6 that the fungicidal activity is given by the specific substituent (A-X) present on the phenoxy group. This substituent is not claimed in the present application.

Claims 1-12 meet therefore the criteria of Art. 33 (3) PCT.

# INTERNATIONAL SEARCH REPORT

Rec'd PCT/PTO 25 MAY 2005

Interr Application No  
PCT/GB 03/04834

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 C07C235/20 A01N39/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BEILSTEIN Data, CHEM ABS Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 001 721 A (STAUFFER CHEMICAL CO) 2 May 1979 (1979-05-02) page 3, line 7 - line 11; claims 1,3,10-14 & US 4 168 319 A 18 September 1979 (1979-09-18) cited in the application ---	1,11,12
A	EP 0 010 298 A (BASF AG) 30 April 1980 (1980-04-30) page 22, compounds 53, 54, 55; claims 1, 3, 4 ---	1,11,12
A	EP 0 751 120 A (NIHON NOHYAKU CO LTD) 2 January 1997 (1997-01-02) Table 1a, compounds 82, 83, 84; claims 1-5 --- -/--	1,11,12

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

26 February 2004

Date of mailing of the international search report

03. 03. 2004

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# INTERNATIONAL SEARCH REPORT

Inter: Application No

PC1/BB 03/04834

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 016, no. 180 (C-0935), 30 April 1992 (1992-04-30) & JP 04 021677 A (TOKUYAMA SODA CO LTD), 24 January 1992 (1992-01-24) abstract ----	1,11,12
A	DE 29 48 095 A (HOECHST AG) 19 June 1981 (1981-06-19) claims 1,3-5; example 3 ----	1,11,12
A	DE 37 02 964 A (SHELL AGRAR GMBH & CO KG) 11 August 1988 (1988-08-11) claims 1-7; table 1 ----	1,11,12
A	US 4 049 423 A (BAKER DON R ET AL) 20 September 1977 (1977-09-20) cited in the application abstract ----	1
A	FR 2 359 816 A (STAUFFER CHEMICAL CO) 24 February 1978 (1978-02-24) cited in the application claims 1-8; examples 1-6 -----	1

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 03/04834

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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Information on patent family members

International Application No

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